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NEW METHODS SAVE LEAD, CHEMICALS

ELIMINATE LEAD JACKETS IN GALVANIZING TANKS -- Vechernyaya Moskva, No 211, 5 Sep 49

Soviet industry has now found a way to build galvanizing tanks without the lead jackets ordinarily required. The jackets formerly used were 3-6 millimeters thick and had to be of the highest quality lead. The life of such a jacket was only 8-12 months. The new coating method is far less expensive, is acid-resistant, and will stand any concentration of the galvanizing solution. From observations of such a tank in operation at the Metropolitan Machinery Plant imeni Kaganovich, it may be stated with confidence that the new tank will last for years.

Nearly every metalworking plant and machine shop does some chrome plating of parts. Large enterprises such as the Auto Plant imeni Stalin, the Moscow Plant for Low-Power Automobiles, and others have large shops where thousands of parts are chrome-plated daily in lead-sheathed galvanizing tanks. There are tens and hundreds of such tanks now in use. Tons of precious first-grade lead are needed to maintain them. With the new method of coating tanks, all the lead previously used in these jackets can be saved.

The plants which should be particularly interested in this process are the Kol'chugin Plant imeni Sergo Ordzhonikidze, the Kharkov "Serp i molot" Plant, the Moscow Precision Instruments Plant, plants of the Main Administration of Metal Parts of the Ministry of Local Industry RSFSR, and many others.

SPECTRAL ANALYSIS SAVES CHEMICALS -- Leningradskaya Pravda, No 239, 9 Oct 49

The Plant imeni Lepse, Leningrad, formerly tested malleable iron by chemical analysis. This method is complicated and requires much time, expensive reagents of which there is a shortage, chemical laboratory equipment, electric power, good ventilation, and, above all, qualified specialists.

Current methods of chemical analysis make it possible to inform the shops of the results in regard to a number of elements such as carbon, managnese, and sulfur in a comparatively short time. But the method is indecisive with respect to flint; frequently, 40 minutes to 2 hours are spent in the process. Therefore, the Lepse Plant decided to adopt the method of spectral analysis.

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It obtained a full set of equipment and began with qualitative analysis for manganese and chrome on the steeloscope, and for flint on the spectrograph. This type of analysis gave quite satisfactory results, but for a long time it was impossible to obtain reliable results with respect to malleable iron.

Not so long ago foreign scientists considered it impossible to determine through spectral analysis the exact amount of flint present in iron. The Soviet Union has worked out such a method, but for a long time it was not possible to introduce it at the Lepse Plant because it required a high-voltage spark unit and special safety measures. The plant applied for assistance to Prof U. K. Prokof'yev, who referred the matter to K. I. Taganov, permanent chief of the Laboratory of Spectral Analysis. As a result, the plant is now able to determine, with very high reliability, the flint content in iron. It has also worked out a method to determine the carbon content in malleable iron. It takes 2-3 minutes to determine the contents manganese and chrome, and 25-30 minutes to determine the content of flint. Moreover, the cost of such analysis has been decreased threefold.

During the past 4 months, the plant has analyzed more than 4,000 samples by means of the spectral method, with a saving of more than 500 kilograms of hydrochloric acid, 250 kilograms of nitric acid, 430 kilograms of sulfuric acid, 230 kilograms of phosphoric acid, and 1,200 grams of silver nitrate, as well as considerable amounts of reagents, electric power, heating apparatus, etc.

Not content with these achievements, the plant intends to introduce in the near future a spectroanalytic method of determining the phosphorus content of malleable iron and to work out similar methods for the quantitative analysis of high-alloy steels and slag. It will also transfer to the spectroanalysis method the control of smelting operations.

Courses are being organized to train qualified workers in spectral analysis.

HITS WASTEFUL SHIPMENTS -- Pravda, No 280, 7 Oct 49

Plants in Yaroslavl' Oblast have been ordering and shipping out products on a narrow departmental basis, ignoring the opportunities for economical exchange within the immediate area.

The Yaroslavl' Rubber Technical Products Plant, for example, must send to Kuybyshev for metal products which were formerly made by the "Krasnyy Mayak" Plant, Yaroslavl', of the Ministry of Construction and Road Machine Building. The "Krasnyy Mayak" Plant no longer makes these products because the Rubber Technical Products Plant is under the Ministry of Chemical Industry.

On the other hand, the Yaroslavl' Brake Plant must get rubber tubes for railroad hose-couplings from Moscow and Kazan', although the Rubber Technical Products Plant is capable of making these tubes. Furthermore, the Moscow and Kazan' plants get raw materials from Yaroslavl' Oblast.

The Rubber Technical Products Plant sends rubber mats for truck and bus cabs to the Gor'kiy Automobile Plant; yet the Yaroslavl' Automobile Plant gets these rubber mats from Kursk.

The management of the Yaroslavl' Brake Plant has requested Mitrokhin, Deputy Minister of the Chemical Industry, to initiate production of rubber tubes in the Rubber Technical Plant.

OBTAIN CELLULOSE, ESTERS -- Sovetskaya Latviya, No 241, 12 Oct 49

Chemists of the State University imeni A. A. Zhdanov, Leningrad have worked out new methods for determining the amount of moisture in hides. Processes for obtaining cellulose, esters, and other substances have also been developed.

EXCEED PRODUCTION QUOTAS -- Kommunist, No 261, 4 Nov 49

The Alaverdi Chemical Plant completed its October program 10 days ahead of schedule. At present its daily output continues to be above norm.

CARBIDE PLANT IMPROVES METHODS - Kommunist, No 249, 21 Oct 49

There have been a number of technical improvements in production methods at the Yerevan Carbide Plant. Among these are the replacement of adapter suspension rings with metal rods, which are more economical, a new method of obtaining generator gas for roasting limestone, automatic regulation of furnace electrodes by means of alternating current, and hollow contact plates, which improve the work of the furnace electrodes.

In addition, the engineers are now trying to devise a method for collecting dust and utilizing escaping heat. The solution of this important problem will result in a complete change in the present technology and will have a considerable effect not only on the plant concerned but on the entire branch of industry.

The plant has pledged to complete the year plan by 7 November and to release to the state not less than 4 million rubles.

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